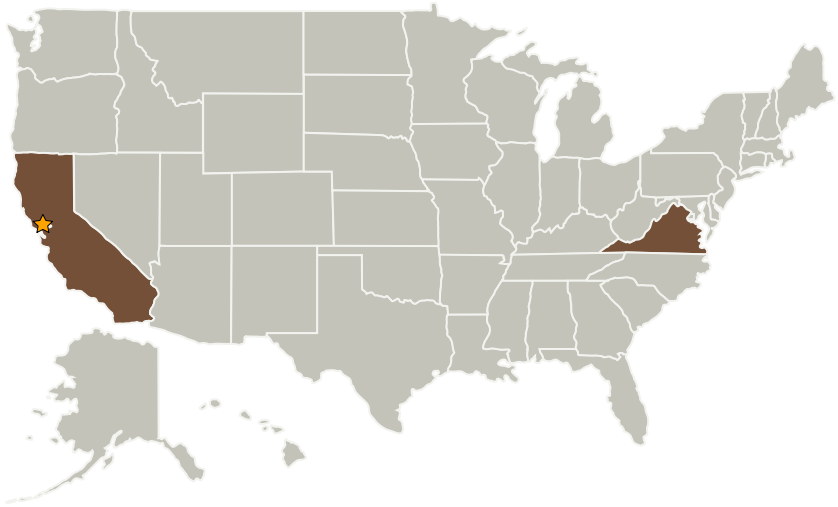
Surface Operations Data Analysis and Adaptation Tool, Phase I

Completed Technology Project (2005 - 2005)

Project Introduction

The Surface Management System (SMS), developed by NASA Ames Research Center in cooperation with the FAA, has received wide and significant acceptance by the air transportation community. The SMS utilizes flight plan data and airport surface surveillance data to track and model the operation of flights on the airport surface. Predictions of flight arrival and departure times from specific runways are generated by SMS. SMS provides these predictions of future airport operations to numerous airport, ATC and air carrier users to create shared situational awareness. NASA continues to conduct advanced research on airport surface traffic management concepts and tools. Fundamental research in this area has been very difficult to conduct in the past, however, due to the lack of electronic data representing airport surface operations. With the current deployment of airport surface surveillance systems, such data is now becoming available. This effort proposes the creation of a surface operations data warehouse and analysis tool for effective analysis and understanding of airport surface operations. Data mining capabilities will support research of taxi routing, sequencing and congestion management strategies used by air traffic controllers. Such a tool will also provide significant benefit in the SMS adaptation process.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Mosaic ATM, Inc.	Supporting Organization	Industry	Leesburg, Virginia

Primary U.S. Work Locations	
California	Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Chris Brinton

Technology Areas

Primary:

- TX16 Air Traffic Management and Range Tracking Systems
  - TX16.3 Traffic Management Concepts